

-REMARKS-

This paper is responsive to an Official Action that issued in this case on May 29, 2003. In that Action, the Office allowed claims 9-15 and rejected claims 16-19 under 35 USC §103 as being obvious over U.S. Patents to Frew et al. and Tutsch et al.

Responsive to the Action, applicant has amended claim 16 and cancelled claim 17. Furthermore, applicant hereby cancels claims 1-8, which were formerly withdrawn from consideration by the Examiner. Claims 9-16 and 18-19 are now in the case.

Claims 16-19 are Not
Obvious over the Cited Art

Independent claim 16, as amended, recites an article that comprises, in pertinent part:

a plurality of integrated circuit ("IC") chips, each said IC chip having:
electrical leads extending to one side thereof;
bonding pads disposed at said one side, wherein said bonding pads are electrically connected to said electrical leads;
bumps disposed on said bonding pads, wherein **said bumps have an oblong shape** and wherein an exposed portion of each of said bumps extends beyond said one side and beyond said bonding pads ...

The Office alleged that claims 16-19 are unpatentable over Frew et al. (U.S. Pat. No. 5,327,327) in view of Tutsch et al. (U.S. Pat. No. 6,380,616). The Office alleged that Frew et al. teaches all claimed features except "elongated bumps." The Office asserts, however, that Tutsch et al. teach a method of forming bumps to electrically connect chips to an outside circuit. According to the Office, the bumps of Tutsch et al. could replace the two-part bump and lead tip arrangement taught by Frew et al., thereby obviating claims 16-19.

As correctly noted by the Office, Tutsch et al. discloses "balls" for use as a component contact. Tutsch et al. depict such balls being attached, in various ways, to conductors and positioned on one side of a semiconductor component. (See, e.g., FIGS. 1-5, 7 and 8 of Tutsch et al.)

The "balls" disclosed by Tutsch et al. are not "elongated" or "oblong;" rather, they are spherical — the commonly understood shape of "balls." Spherical bumps or balls are typically used in semiconductor processing as electrical and physical contacts, while the oblong-shape bumps recited in claim 16 are not.

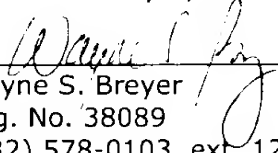
Consequently, independent claim 16 and claims 18-19 dependent thereon are not obviated by the combination of Frew et al. and Tutsch et al. It is therefore requested that the Office withdraw its Section 103 rejection of claims 16-19.

Conclusion

It is believed that claims 9-16, 18, and 19 now presented for examination are in condition for allowance. A notice to that effect is requested.

Respectfully,

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